

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 January 2001 (25.01.2001)

PCT

(10) International Publication Number
WO 01/06774 A1

(51) International Patent Classification⁷: H04N 5/455

(21) International Application Number: PCT/US00/19134

(22) International Filing Date: 13 July 2000 (13.07.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/144,413 16 July 1999 (16.07.1999) US

(71) Applicant (for all designated States except US): THOMSON LICENSING S.A. [FR/FR]; 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BOUILLET, Aaron, Reel [US/US]; 1520 Persimmon Place, Noblesville, IN 46060-9713 (US). STEWART, John, Sidney [US/US]; 3655 West 71st Street, Indianapolis, IN 46268 (US).

(74) Agents: TRIPOLI, Joseph, S. et al.; Thomson Multimedia Licensing Inc., P.O. Box 5312, 2 Independence Way, Princeton, NJ 08540 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

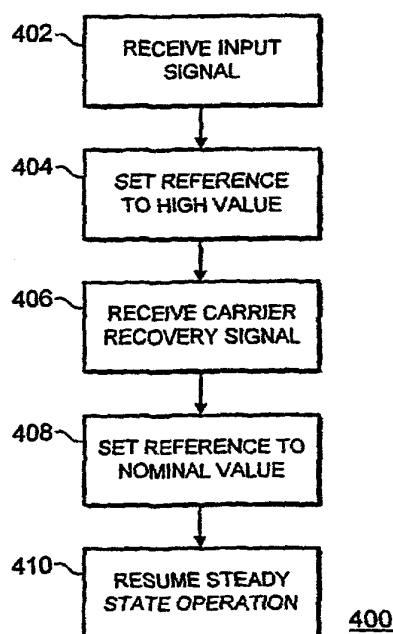
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SELECTIVE GAIN ADJUSTEMENT TO AID CARRIER ACQUISITION IN A HIGH DEFINITION TELEVISION RECEIVER



(57) Abstract: In a receiver for processing a vestigial sideband (VSB) modulated signal containing terrestrial broadcast high definition television information and a pilot component, and for which multipath interference can lead to significant attenuation within narrow bands of the received signal spectrum containing the pilot tone of an Advanced Television Systems Committee (ATSC) high definition television (HDTV) broadcast signal, it has been found desirable to amplify the input signal in order to achieve synchronization of the receiver's phase-locked loop to the received pilot tone. Once this initial acquisition has been established, the amplification applied to the received signal can be reduced to a level appropriate for remaining blocks in the demodulation chain without upsetting the pilot tone synchronization. Thus, according to the present invention, the gain applied to the received ATSC VSB signal is set higher during pilot tone acquisition than it is during the remaining stages of demodulation.

WO 01/06774 A1